
PREPARATION FOR INVASIVE PROCEDURES

BEHAVIOURAL SCIENCE
LEARNING MODULES



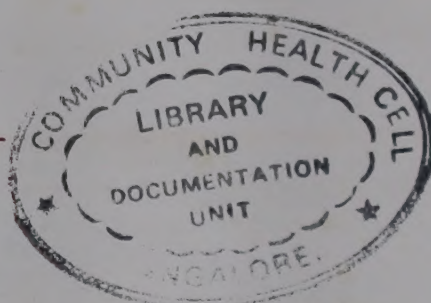
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PREPARING PATIENTS FOR INVASIVE MEDICAL AND SURGICAL PROCEDURES: BEHAVIOURAL AND COGNITIVE ASPECTS

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These materials provide:

- * A statement of the nature of the problem.
- * A review of the effectiveness of psychological preparation for invasive medical procedures.
- * Instructions on how to use psychological preparations with adults and children.

Adding behavioural and cognitive components to preparation of invasive medical and surgical procedures:

- * does not lessen the need for good medical and nursing care before, during and after the implementation of invasive investigations and treatments;
- * does reduce patients' anxiety and improve their cooperation before, during and after surgery, etc.;
- * does reduce the amount of post-operative analgesics required;
- * does speed up post-operative physical recovery and reduce time spent in hospital;
- * does reduce the time and amount of support resources required by the patient for recovery;
- * can reduce the amount of medical phobias in the community.

Learning Objectives and Methods

Upon completion of this module, the student should know:

1. The advantages of introducing cognitive and behavioural components into routine preparation of patients for invasive medical procedures, including surgery.
2. The range of cognitive and behavioural procedures available.
3. The processes involved in selecting patients for these procedures and their limitations.

Upon completion of the module the student should be able to:

1. Establish effective communication in order to assess the patient's level of anxiety, knowledge and ability to actively participate in their own care, before, during and after invasive procedures.
2. Select patients and implement specific cognitive and behavioural preparation procedures.
3. Evaluate the clinical effectiveness of these procedures.

A Review of the Nature of the Problem

Introduction

Invasive medical and surgical procedures can be extremely distressing to people and adversely affect their ability to cope, even when the actual procedures are not a real threat, in a medical or biological sense (O'Hara et. al, 1989).

It is normal for anybody undergoing a strange or unfamiliar experience to want to know what is happening and how it will affect them. If there is not enough information for a person to make sense of what is happening to them they may become overwhelmed emotionally, and in medical settings strong emotions such as fear, anxiety and anger can render a person unable to collaborate with doctors, nurses and other medical staff and even actively disadvantage their treatment, e.g. through increased use of anaesthetics.

Thus, the assessment of a patient who is to have an invasive medical procedure requires careful attention to what that person believes is happening to them, their beliefs in why they have to have the operation etc., their knowledge about the operation (e.g. do they know someone else who has had it) and their ability to understand and relate to themselves any information provided. Excessive anxiety, unfamiliarity with medical settings and treatments, cultural and social backgrounds can all affect this phase of preparation.

Patients experience a number of emotional reactions both before and after invasive medical procedures. These include anxiety (such as fear of pain, uncertainty about the future, fear of medical procedures and so on), depression, anger and post-operative adjustment problems. (e.g. expectations regarding personal functioning). Some patients may experience learned helplessness. This is observed in the patient who suffers a depression that is initiated and characterised by a loss of control over a situation that renders his/her dependent on medical personnel and significant others (spouse, children). This person generally feels powerless and helpless, does not have enough motivation to initiate responses rationally and pictures the future as negative. (Blythe and Erdahl, 1986).

A recent major review of 191 studies on the efficacy of psychoeducational effects on post-operative recovery of adult surgical patients (Devine, 1992) confirmed what many individual studies have consistently argued; viz. the benefits are real. This review paper is important because it encompasses studies published from 1963 until the present time and a formal meta analysis of the beneficial effects was carried out. Since all the studies subjected to the meta

analysis utilized good control conditions and relevant outcome measures (e.g. length of post-surgical hospital stay, incident of respiratory and other medical complications, degree of post-surgical pain and use of analgesics, degree of anxiety and depression, etc.), it can now be said quite forcefully, that for clinicians to ignore psychological factors in preparation of adults for surgical and invasive medical procedures, is to cause unnecessary suffering and to add to the economic costs of surgery and hospitalisation.

These issues are taken up and explored in detail in this manual.

Anxiety and coping mechanisms

A patient's anxious reaction to undergoing surgical invasive procedures is one major factor which affects pre- and post-operative adjustment. Following is a brief review of studies demonstrating patients' reactions in terms of their effectiveness and non-effectiveness and how these reflect the need for preparatory modules which give medical practitioners ideas of how to make the patient more psychologically comfortable with the situation he/she finds himself/herself in.

Simpson and Kellett (1987) discussed two theories of patient anxiety which state that pre-operative anxiety is directly related to post-operative adjustment. Janis's model holds that either no anxiety or excessive anxiety prior to invasive procedures, both lead to poor post-operative adjustment whereas, Leventhal's theory argues that any pre-operative anxiety is harmful. Robins (1987) outlines an inter-reactional model of stress and coping which defines stress as "the interaction between the individual, his or her resources and capabilities, and the demands of the situation" (p.251). Therefore, the more demanding the situation appears to the individual, with regard to his/her coping abilities, the greater the psychological distress experienced. Coping thus involves those attempts (whether cognitive or behavioural) that the individual implements in order to deal with taxing demands in a given situation. Robins (1987) found that children who prepared for orthopaedic surgery using a greater number of coping techniques before surgery experienced less anxiety and withdrawal after surgery. They used strategies to form the most positive picture of the situation possible. This cognitive activity increased the children's sense of mastery and control. Pick, Pearce and Legg (1990) found that patients who use positive cognitive coping strategies experienced less intense early post-operative pain. Although this study was of the use of spontaneous coping techniques, such techniques can be taught to less adaptive patients before undergoing surgical procedures.

Some patients requiring invasive medical procedures may deny the need for the procedure or the possibility of complications arising, thus psychologically distancing themselves from the concerns and anxieties related to their situation (Levine et al, 1987). Although this may have some benefits for the patient, it interferes with the learning of information relevant to the surgical procedures the patient will undergo which, in turn, leads to poorer patient compliance with rehabilitation after surgery. Denial may also be used by doctors who use such statements as, "This will not hurt one bit" when injecting with a needle. Levine et al. (1987) noted that, in the short-term (days after surgery), denial led to better physical adaptation; however, to function appropriately in the long term (weeks, years after surgery) coping strategies needed to be applied before and after surgery.

Abiodun and Onguremi (1990) identified older patients and female patients as needing psychological intervention techniques in a Nigerian hospital population. Bryant and Mayou (1989) noted differences among older and younger men undergoing coronary bypass surgery. Younger men had more responsibilities for which good health was necessary (e.g. young families, career prospects) compared to the older man facing retirement. The authors concluded that psychological preparation before surgery would result in more realistic post-operative expectations regarding patients' lives thus, improving recovery. Linn, Linn and Klimas (1988) found that patients experiencing more stress before invasive medical procedures were susceptible to poorer surgical outcomes and to infectious diseases because of a suppressed immune function due to stress. They suggested that the reduction of this stress is likely to result in an improved cellular immune function and better post-surgical recovery. Pre-operative intervention outlined in preparatory modules could assist with this. Other studies which demonstrate the need for pre-operative preparation include Anderson (1987) and Atkins (1987).

Patient practitioner relationship

Another factor affecting a patient's reaction to invasive medical procedures is his/her relationship with the medical practitioner. Patients who feel helpless need to regain some sense of control and they may misguidedly do so by being non-compliant. Non-compliance may take the form of withholding information from the practitioner. Since the practitioner is in a position of power it is his/her duty to make the patient feel comfortable to ensure compliance. This may be achieved through sincere and open

communication with the patient explaining as to what is happening and will happen to him or her. Medical students are generally taught to value the scientific side of medicine and not enough about the patients and their needs (DiMatteo and DiNicola, 1982).

A primary patient complaint is the lack of information given by doctors and the complexity and intimidating nature of the language used (Blythe and Erdahl, 1986). To avoid conflict between the patient and doctor regarding information control (by either party) and to extinguish patient non-compliance, which leads to a less successful recovery, an appropriate level of communication is required. Not all medical practitioners can apply the necessary verbal and nonverbal communication skills and it is suggested that these may be taught in pre-surgical preparation modules. To maximise effectiveness of communication, doctors and other health professionals, need to know how to psychologically assess a patient and how to effectively communicate with the patient to reduce anxiety and ignorance and to build up the patient's knowledge and skills to optimise outcome.

Medical phobias are quite common place, especially phobias of injections (e.g. Agras, Sylvester and Oliveau, 1969; Taylor, Ferguson and Wermouth, 1977) and of going to the dentist, and a few people may have such excessive fear of doctors that they avoid seeking help, with sometimes fatal consequences; for example, a woman who detects a lump in her breast but will not go for a check-up because of her fear of doctors and hospitals, or a woman with vaginismus who will not allow a vaginal examination for screening for cervical cancer.

A good definition of a phobia has been provided by Marks (1975). He says that a phobia is a special form of fear which (i) is out of proportion to the demands of the situation; (ii) cannot be explained or reasoned away; (iii) is beyond voluntary control; and (iv) leads to avoidance of the feared situation.

How such fears and phobias of medical situations develops is a complex question to which much research has been addressed. Certainly, prior traumatic experiences in medical settings is an important factor but one that clinicians often do not question their patients about. However, not all such fears and phobias come from traumatic experiences. Plain ignorance and unfamiliarity with doctors, clinics and hospitals can lead to fear, a fear of the unknown. Also, observing others express fear in medical settings or talk about their medical fears and phobias can indirectly lead to the development of increased anxiety about such situations; e.g. a parent can unwittingly convey medical anxiety to their child.

Even without overt anxiety being present the person on whom the medical or surgical procedures are being done is in a passive, dependant relationship to the surgeon, physician, dentist, nurse, etc. How individuals react to this reflects on their perception of control. If a patient feels they have no control over what is going on, they are likely to be more fearful than if they feel they have some control. Thus, the clinician needs to enhance the sense of control that the patient feels they can have and not reduce it, as so often happens if a patient is treated as an object or case. However, issues of perceived control are complex and this perception of control can vary along several dimensions such as internal (the person has a strong inner sense of being in control of what happens to them and they make decisions for themselves), external (where external forces, such as powerful others, e.g. doctors, have the greatest control over them) and chance (where control is a matter of chance, fate or predetermined).

In order to find out how a patient perceives these issues the doctor or other clinician will have to have effective communication with the patient. This means both being able to ask questions, to pay attention to nonverbal signs of anxieties, e.g. posture, hesitations in speech, etc. and to encourage the patient not to feel guilty about expressing their fears and worries and about asking questions which, without sympathetic encouragement, they might not ask for fear of appearing stupid, ignorant, disrespectful or wasting the doctor's time.

There is no doubt that taking these factors into account can improve the ease of carrying out invasive medical procedures and the actual recovery outcome both from physical, emotional, social and economic perspectives.

So, what are the effective cognitive and behavioural techniques that have been used?

A Review of the Effectiveness of Psychological Preparation for Invasive Medical Procedure

Introduction

Invasive medical procedures can be described as any operative or diagnostic technique that usually involves the use of instruments and requires the penetration of tissue or the invasion of a body orifice. People are often scared of invasive procedures. The associated fears can include the following; fear of pain and discomfort, fear of the unknown, fear of cancer, fear of the destruction of body shape, fear of loss of autonomy and fear of death. People are often

scared of hospitalisation and invasive medical procedures because the information given to them is insufficient and presented in an anxiety-provoking way. Doctors and nurses are not always good communicators, and the type of information they present as well as the way in which they present this information has an impact on their clients's feelings and attitudes.

Contemporary psychology can contribute to understanding the causes of illness and the psychological processes involved in being a hospitalised person, and also to carrying out effective interventions. Psychological techniques focus on the alleviation of the fears associated with invasive medical procedure and the reduction of psychological stress. Studies have shown that reducing pre-procedural concern can facilitate post-procedural adaptation (Anderson and Masur, 1983, Kaloupek, 1987). These techniques are easily mastered by medical personnel. As well as reducing the anguish of patients and families, psychological preparation also encourages better compliance with the instructions given by medical personnel, shortens the period of stay in hospital, and decreases the amount of pain relieving medication used by patients (Wood and King, 1989).

Janis's model of adjustment suggests there are three levels of anxiety which patients may experience in relation to invasive medical procedures. The patients who are 'moderately anxious' make the best recovery. Those patients who are 'extremely anxious' have poor recovery, because their information gathering processes and mental preparation are inhibited, thus they experience more pain during the actual medical procedure as well as post-operatively. The patients who are not anxious at all about the invasive medical procedure they are to undergo also have poor recovery, because their expectations are unrealistic and optimistic; thus, their poor recovery when the invasive medical procedure is more painful than they expected. (Wood and King, 1989).

Therefore, adequate information and communication is of vital importance. Health professionals should offer information about typical sensations to be expected both during and after the invasive medical procedure. This allows the patient to develop realistic expectations about the procedure and the associated level of pain. Also, patients who are given adequate information, usually have reduced stress associated with the invasive procedures. In other words, better informed patients - via psychological preparation - get better quicker (Linn, Linn and Klimas, 1988, Webber, 1990, Mavrias, Peck and Coleman, 1990, Wallace 1986).

Cognitive-behavioural preparation

Cognitive-behavioural preparation improves post-operative recovery in two main ways. First, by directly reducing the patients pre-operative anxiety and fear. Second, by training the patients to use cognitive-behavioural coping strategies for the reduction of pre- and post-operative anxiety and pain. The advantages of this second factor are that one can account for the preparation effects which were initially designed to reduce pre-operative anxiety directly, and one may also be able to predict which preparation is best suited for patients with particular coping styles (La Montagne, 1987, Eisendrath, 1987, Lenne, et al. 1987).

Cognitive-behavioural preparation methods include relaxation, cognitive and behavioural coping strategies (such as refocussing of attention, self-statements), videos/film or live modelling and information dissemination regarding the invasive medical procedure. All of these have been found to be effective methods to use in the psychological preparation of patients for invasive medical procedures (Smith, Acherson, and Blotcky, 1989, Timko and Janoff-Bullman 1985, Weiss, Eichhorn and Geissler, 1989, Pinto and Hollandworth, 1989).

Patients who are poorly prepared or who use maladaptive coping strategies will become anxious, angry and depressed in coping with illness. Thus, the ultimate goal of cognitive-behavioural preparation is faster and less painful recovery.

Behavioural techniques

Behavioural methods focus on providing patients with a self-regulating technique to reduce their experiences of pain and anxiety, and to improve their post-operative adjustment. Wells et al., (1986) studied the effects of stress inoculation on patients' anxiety, pain and post-operative adjustment. Twenty-four patients were randomly assigned to either (a) a stress-inoculation group, or (b) a standard hospital instructions control. It was found that pre-surgical anxiety scores for the treatment group were significantly lower than the control group. The treatment group patients experienced a decrease in their state-anxiety as they approached surgery, whereas the control group experienced an increase in their state-anxiety. Also, patients in the treatment group reported less anxiety in hospital during their recovery than did patients in the control group. Thus, in this study it was found that patients who received stress-inoculation training reported significant lower levels of pain than patients who did not receive such training. Blythe and Erdahl

(1986) also reported that stress-inoculation was an effective strategy used in their study to decrease patients' anxiety and depression before open heart surgery.

However, Postlewaite, Stirling and Peck (1986) found that stress-inoculation training was no more effective than the control group. In this study, stress-inoculating training efficacy was clinically evaluated for post-operative pain control using patients undergoing coronary artery graft surgery. Patients were assigned to either (a) a treatment group receiving stress-inoculation training, or to (b) an attention education control group. No differences were found between the two groups on two pain rating measures, analgesic intake, or measures of state-anxiety and depression. The possible reasons for the ineffectiveness of stress-inoculation training in this study were put forth as: (i) the difference between experimental and clinically induced pain, (ii) the multiple demands of the pre-operative period, (iii) possible memory difficulties in patients, or (iv) that the stress-inoculation procedure is simply not sufficiently potent for the intensity of the pain.

Other behavioural techniques which have been found to be effective include the following: Biofeedback and relaxation techniques applied to the recovery from the psychological trauma of hysterectomy (Lobb, Shannon, Recer and Allen, 1984); relaxation with guided imagery on the psychophysiological stress response and wound healing in surgical patients (Holden-Lund, 1988).

Information giving

Medical practitioners are responsible for obtaining informed consent for invasive medical procedures, which includes an explanation of the reasons for the procedure and its likely and possible outcomes and effects. Most adult patients wish to be informed in detail about the invasive medical procedure they are to undergo. The issue here is how much information must a doctor, or other health professional, present to obtain informed consent. For an action in law on negligence to be successful, there must be proof of damage to the patient. Recently, it has been suggested that the primary need is for the patient to understand enough information to be able to weigh up the pros and cons in coming to a decision of whether to go ahead with a procedure or not, in the light of his/her plans and values. But, it has also been argued that giving information to fulfil a legal requirement may endanger the patient's well-being, as the patient may become too scared to have the surgery (Anderson, 1987, Wallace, 1986).

Ridgeway and Mathews (1982) compared three different methods of providing

information to patients. The first group received information about the surgical procedure and its effects. The second group was instructed in a cognitive-coping technique. The third group was given general information about the ward. Sixty patients were randomly assigned to these three groups. It was found that information about surgery did enhance the knowledge and usefulness ratings used in this study. But the cognitive coping strategy appeared to have the most effect on indices of recovery. It was also found that patients who refused psychological preparation, responded poorly immediately after surgery.

The most important finding of this study was that, of the interventions investigated, the cognitive-coping strategy was associated with the best outcome. The cognitive-coping technique was a much more effective preparation than giving standard information about procedures, and patients in the cognitive-coping group reported fewer worrying thoughts. Ridgeway and Mathews concluded that cognitive-coping strategies seemed to be flexible enough to be generally applicable to the majority of surgical patients.

Webber (1990) found that pre-operative education was beneficial in both the subjective and objective improvement of patient recovery, particularly when procedural information and coping skills are also provided. Mavrias et al. (1990) studied the effect that timing of pre-operative preparation would have on post-operative recovery with 37 cholecystectomy patients. One group was prepared two weeks before surgery, the second group was prepared the day before surgery, and the third was a no-treatment group. No significant differences were found between the two treatment groups; yet, there was a trend in favour of late preparation. It was concluded that early preparation does not necessarily lead to more rapid recovery. This has positive implications for those settings in which there is no time, or in which there are not enough resources for early preparation.

Children

Children perceive a variety of threatening aspects in the hospital experience. These include the threat of physical harm inflicted during the invasive medical procedure, separation from the parents and/or other trusted people, the threat of strange and unforeseeable experiences, the uncertainty about acceptable behaviours, and the loss of control and personal autonomy. Children who undergo systematic preparation, rehearsal, and supportive care respond best before, during and especially after the procedure (Reissland, 1983).

Also, younger children differ from older children in how they understand their hospital

experience and how they conceive of strategies for coping with fear and pain. In the study by Reissland (1983) it was found the older children (7 years 4 months to 13 years 5 months of age) were able to suggest cognitive strategies for coping with fear and pain more often than the younger children, and the older children believed they were able to cope autonomously with fear and pain; while the younger children (4 years 6 months to 7 years 3 months of age) were unable to conceive of cognitive coping strategies, and reported they would depend of their parents to help them cope with fear and pain.

It was also found that younger children, regardless of whether or not they were provided with coping strategies, were more distressed at hospitalisation than older children. This suggests that the younger children are more distressed not because of the hospitalisation conditions, but because of their emotional and cognitive development. Thus, it is recommended that parents are more actively involved in the preparation of children, especially younger children, for invasive medical procedures (Reissland 1983).

Some techniques that have been used for the management of younger children's pain and fears are the following: Behavioural distraction, such as pop-up books; kinaesthetic methods, such as rocking; and imaginal methods, such as relaxation and hypnosis. (Kuttner, 1989).

Some other recommendations for general paediatric care include the following: providing play facilities, humanising the hospital environment and making it more child-friendly, informing children prior to the operation of the nature of the medical intervention, and encouraging parents to visit regularly or even stay overnight in hospital, especially with younger children (Reissland, 1983).

Conclusion

Finally, it can be said that an awareness of psychological factors in understanding illness is not widespread although this awareness is in a better state now than it was a few years ago. An awareness of psychological factors can be improved by looking at people's thoughts, emotions and behaviours. Recent research has shown that cognitive-behavioural approaches have proved to be effective in two main ways. Firstly, they are effective in reducing the anxiety and pain experienced during a variety of invasive medical procedures with both adults and children. Secondly, cognitive-behavioural strategies are cost-efficient in terms of not requiring much time, expensive materials, or resources that are not readily available. Thus, cognitive-behavioural approaches are the main treatment strategies to be described in this module.

Bibliography

- Abiodun, O.A and Onguremi, O.O. (1990) Psychiatric morbidity in medical and surgical wards of a Nigerian general hospital. Journal of Psychosomatic Research, 34 (4), 409-414.
- Agras, S., Sylvester D. and Oliveau, D. (1969) The epidemiology of common fears and phobias. Comprehensive Psychiatry, 10, 151-156.
- Anderson, E.A. (1987) Pre-operative preparation for cardiac surgery facilitates recovery, reduces psychological distress, and reduces the incidence of rate post-operative hypertension. Journal of Consulting and Clinical Psychology 55(4), 513-520.
- Anderson, K.O. and Masur, F.T. (1983) Psychological preparation for invasive medical and dental procedures. Journal of Behavioural Medicine, 6(1), 1-40.
- Atkins, D.M. (1987) Evaluation of a paediatric program for short -stay surgical patients. Journal of paediatric Psychology, 12 (2), 285-290.
- Blythe, B.J. and Erdahl, J.C. (1986) Using stress inoculation to prepare a patient for open-heart surgery. Health and Social Work, 11 (4), 265-274.
- Bryant, B. and Mayou, R. (1989) Prediction of outcome after coronary artery surgery. Journal of Psychosomatic Research, 33 (4), 419-427.
- Devine, E.C. (1992) Effects of Psychoeducational Care for Adult surgical patients: A Meta-Analysis of 191 studies. Patient education and counselling, 19, 129-142.
- DiMatteo M.R. and DiNicola D.D. (1982) Achieving Patient Compliance: The Psychology of the Medical Practitioner's Role. Pergamon.
- Eisendrath, S.J. (1987) Issue of control in the general hospital surgical setting. International Journal of Psychosomatics, 34(1), 3-5.
- Holden-Lund, C. (1988) Effects of relaxation with guided imagery on surgical stress and wound healing. Research in Nursing & Health, 11, 235-244.
- Kaloupek, D.G. (1987) Recommendations for psychological interventions with patients undergoing invasive medical procedures. Behaviour Therapist, 10(2), 33-39.
- Kuttner, L. (1989) Management of young children's acute pain an anxiety during invasive medical procedures. Paediatrician, 16, 38-44.
- La Montagne, L.L. (1987) Children's pre-operative coping: Replication and extension. Nursing Research, 36(3), 163-167.
- Levine, J., Warrenburg, S., Kerns, R., Schwartz, G., Delaney, R., Fontana, Gradman, A., Smith, S., Allen, S. and Cascione, R. (1987) The role of denial in recovery from coronary heart disease. Psychosomatic Medicine, 49 (2), 109-117.
- Linn, B.S., Linn, M.W. and Klimas, N.G. (1988) Effects of psychosocial stress on surgical outcome. Psychosomatic Medicine, 50(3), 230-244.
- Lobb, M.L., Shannon, M.C., Recer, S.L. and Allen, J.B. (1984) A behavioural technique for recovery from the psychological trauma of hysterectomy. Perceptual and Motor Skills, 59, 677-678.
- Mavrias, R., Peck, C., and Coleman, G. (1990) The timing of pre-operative preparatory information. Psychology and Health, 5(1), 39-45.
- O'Hara, M.W., Ghoneim, M.M., Hinrichs, J.V., Mehta, M.P. and Wright, E.J. (1989) Psychological consequences of surgery. Psychosomatic Medicine, 51, 356-370.
- Pick, B., Pearce, S. and Legg, C. (1990) Cognitive Responses and the control of post-operative pain. British Journal of Clinical Psychology, 29, 409-415.
- Pinto, R.P. and Hollandworth, J.G. (1989) Using videotape modelling to prepare children psychologically for surgery: Influence of parents and costs versus benefits of providing preparation services. Health Psychology, 8(1), 78-95.
- Postlewaite, R., Stirling, G., and Peck, C.L. (1986) Stress inoculation for acute pain: A clinical trial. Journal of Behavioural Medicine, 9(2), 219-227.
- Reissland, N. (1983) Cognitive maturity and the experience of fear and pain in hospital. Social Science and Medicine, 17(18), 1389-1395.

- Ridgeway, V. and Mathews, A. (1982) Psychological preparation for surgery: A comparison of methods. British Journal of Clinical Psychology, 21, 271-280.
- Robins, P.M. (1987) Coping responses and adaptational outcomes of children undergoing orthopaedic surgery. Journal of Clinical Child Psychology, 16(3), 251-259.
- Simpson, C.J. and Kellett, J.M. (1987) The relationship between per-operative anxiety and post-operative delirium. Journal of Psychosomatic Research, 31 (4), 491-497.
- Smith, K.E., Acherson, J.D., and Blotcky, A.D. (1989) Reducing distress during invasive medical procedures: Relating behavioural interventions to preferred coping style in paediatric cancer patients. Journal of Paediatric Psychology, 14(3), 405-419.
- Taylor, C.B., Ferguson, J.M., and Wermouth B.M., (1977) Simple techniques to treat medical phobias. Postgraduate Medical Journal, 53, 28-32.
- Timko, C. and Janoff-Bullman, R. (1985) Attribution, vulnerability, and psychological adjustment: The case of breast cancer. Health Psychology, 5(6), 521-544.
- Wallace, L.M. (1986a) Pre-operative state-anxiety as a mediator of psychological adjustment to and recovery from surgery. British Journal of Medical Psychology, 59, 253-261.
- Wallace, L.M. (1986b) Informed consent to elective surgery: The 'Therapeutic' value? Social Science and Medicine, 22(1), 29-33.
- Webber, G.C. (1990) Patient Education: A review of the issues. Medical Care, 28(11), 1089-1103.
- Weiss, H., Eichhorn, G., and Geissler W. (1989) The changing psychosocial profile of patients before and after coronary artery bypass surgery. A preliminary report with the enlarged Bortner-scale. Activitas-Nervosa-Superior, 31(3), 209-211.
- Wells, J.V., Howard, G.S., Nowlin, W.F., and Vargas, H.J. (1986) Pre-surgical anxiety and post-surgical pain and adjustment: Effects of a stress inoculation procedure. Journal of Consulting and Clinical Psychology, 54(6), 831-835.
- Wood, M.M. and King, N.J. (1989) Preparation for Medical Procedures. In: King N.J. Remenyi A.G. (eds). Psychology for the Health Sciences. Chp.17, pp. 235-244. Thomas Nelson; Australia.

Instructions on how to Teach Behavioural and Cognitive Interventions to Prepare Patients for Invasive Procedures

Establishing effective communication with patients

A general seminar on communication skills:-

1. Short introductory talk outlining various components of effective communication:

- Listening skills
- Questioning skills
- Paying attention to the content and the process of communication
- Nonverbal and Verbal component in both doctor/nurse and patient
- Specific listening skills
- Specific questioning skills

2. Role playing

- Use this to demonstrate above skills

(See Appendix 1 for practical suggestions and instructions on communication skills and role play)

Dealing with the acute or emergency situation

Calm the patient

The first thing is to calm the patient as much as is possible by:-

- (a) Talking, in a low, even paced voice (do not talk too fast) whilst questioning and explaining what is about to happen can be very effective. Check whether the patient has really understood what you have told them.

If possible have a familiar, friendly person present (especially for a child) both pre-operatively and post-operatively.

- (b) Use of imagery: see if you can get the patient to think of, or imagine, a beautiful, peaceful, calm scene. If they cannot do this suggest a scene which is likely to be calming; e.g. flowers, trees, country scene, etc.
- (c) Focus attention on breathing calmly: e.g. ask patient to breathe in through their nose, count through to five or ten

(depending on how conscious and cooperative the patient is) and then breathe out steadily through the mouth. Repeat this as often as necessary. Getting a patient to do this into a paper bag and thereby adjusting CO₂ blood level, can quickly bring panic reactions under control.

- (d) The use of firm, but gentle touch can also help calm an anxious, agitated person.

Explain to patient what is to happen

Be sure to describe:

- (a) the procedures (e.g. "I am going to give you an injection that will send you to sleep");

- (b) the reason for the procedures and the likely outcome (e.g. "You have to have an operation on your stomach for gall stones and you will not feel pain during the operation and you will be unconscious during it. After the operation you will not have the stones").

- (c) the sensations to be expected before, during and after the invasive procedure

e.g. Before; "You will feel the sensation of the needle but any pain is normally over in a second or two".

During the procedure: e.g. "You may feel a gagging sensation as this tube goes down your throat".

After the procedure: e.g. "You will find that you are restricted in your movements and unable to pass faeces for several days. This is a normal reaction".

Help the patient to be in control and alleviate unnecessary discomfort (physical and emotional)

Encourage use of relaxation imagery and breathing techniques whilst carrying through normal post-operative care.

Be sure to honestly answer patients' questions. Telling lies should usually be avoided. For example, if you tell a patient a procedure will not hurt and it does, it puts the patient in a conflict; "The doctor or nurse is a liar or I am feeling something that doesn't really exist and therefore I am abnormal and should worry".

Dealing with the non-acute patient

The same procedures as in the preparation for the acute patients can be used. Because there is more time, there is the opportunity for the patient to practice the skills of being calmer and in control, and also more detailed relevant information can be provided prior to the invasive procedure.

As well as carrying out a physical examination, taking a history and making a diagnosis, it is at this stage that the patient's own perspective of their illness or medical problem can be established, including what they believe (cognitions) about the causes and likely treatments and outcome for their illness and how they feel about this (e.g. numb, resigned, fatalistic, ready to collaborate in getting better, etc.).

Some estimate of the patient's own personal resilience and their social resources should be made at this stage. (e.g. what other people need to be included in discussions about their preparation for the invasive procedure and its subsequent management).

Avoid assuming that the patient has accurate knowledge of their medical problem.

Provision of information

Simple, clear factual information repeated several times and in different formats allows the patient to actually assimilate the knowledge and its relevance to their own case.

Specific techniques for providing information:

(a) Spoken word

Use spoken communication that actually works (see Section I: Establishing effective communication with patients).

(b) Written material

The provision of clear, simple, non-patronising, written information is often very helpful. This can be in at least two forms:-

(i) **standard pamphlets** in simple language, explaining the particular medical problem of the patient

(ii) **written summaries** at the end of a verbal

consultation. This need only be a few brief lines to serve as cues to help the patient remember what was discussed in the consultation.

(c) Nonverbal material

Pictures, diagrams and simple cartoon figures, can substitute for words to assist illiterate patients and young children in learning about their problem and what will happen to them during treatment.

(d) Audio-tapes

Short explanations of the procedures can be put on to an audio-tape for patient use. One advantage of this is the person can play this as frequently as necessary to themselves and it is under their own control. Another advantage is that they can be especially useful for children and illiterate patients.

Specific cognitive and behavioural coping strategies

The anxiety management procedures already described (in Dealing with the acute emergency situation) can be practised and refined to meet the individual's needs because there is an interval between initial assessment and implementation of the invasive procedure. This is most important for elective surgery and where the patient is on a waiting list to have any form of invasive medical procedure.

(a) To the relaxation techniques already described, i.e. controlled breathing and imagery, progressive muscle relaxation can be taught. This involves teaching the patient to alternatively, deliberately tense up and relax specific muscles. This can be done throughout the whole body but attention can also be focussed on muscles that are particularly chronically tense. Once this technique has been learnt by the patient, it can be combined with relaxing imagery (see above). This combined technique gives many patients the ability to feel in control and remain reasonably calm even during painful procedures carried out while they are conscious. One reason why it helps them remain in control during these procedures is that it is an excellent form of self-distraction.

(See Appendix 2 for instructions on Progressive Muscle Relaxation).

- (b) A technique that takes some time for a person to acquire but is very useful for future stressful situations is cognitive rehearsal. Cognitive rehearsal is a very effective means of helping a person feel in control in dealing with a situation that they really do not want to think about or front up to. It can involve both imagery, such as deliberately imaging an anxiety producing scene, (e.g. invasive procedure and imagining themselves or someone they relate to, coping with it) and, also, involve deliberately teaching a person to tell themselves that they "can cope" with a difficult situation without being overwhelmed by it, (e.g. they could imagine themselves having the operation they have to have and going through all the stages that they have been informed about during the provision of information stage). They then can be taught to focus of what they anticipate will be particularly stressful, such as post-operative pain. They can rehearse telling themselves that although this is painful they "can cope" with it and reduce the pain using the relaxation techniques they have been taught, instead of thinking to themselves, "How awful this is and I must have more pain-killers".

(See Appendix 3 for further details on Cognitive Rehearsal).

- (c) Modelling involves the patient indirectly experiencing the feared situation without it going wrong in any major way by watching someone else either directly, or indirectly via film or video, carry out certain activities, which the observer then tries to copy. For modelling to work the patient has to be able to relate to the model (that is, feel some emotional attachment to the model) and this normally involves the model being similar to the patient in sex, age, race and general social background. Another type of model can be someone who possesses some prestige so that, for children in particular, a hero figure with whom the child identifies can be a very powerful model. The essence of modelling is that the model goes through the procedure while the patient watches. There are at least two important ways in which the model may behave in a medical setting:-

- * The first is to have a model who copes as if there is no difficulty at all. This is known as a 'mastery model'. The literature shows this is not a very effective model to use in medical settings.

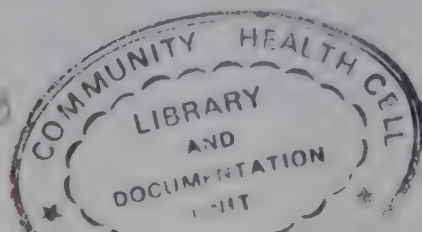
- * A better model is a coping model. This is one who shows the same anxieties as the patient is experiencing and then goes on to describe how he/she coped with the invasive procedure without becoming fearful or panic-stricken and having a feeling of being in some control throughout. The model may be live or symbolic, e.g. film, video or cartoon. If video facilities are available, then ex-patients can talk about their experience and how they coped. They can even be shown in the operating theatre, etc., whilst describing what they felt and how they dealt with it. For simple procedures a live in model can easily be used (e.g. a child that has some anxiety but copes well with injections could be the first of a group of children to be given an injection and he/she can tell the others what it was like and how they coped). However, a live model may go out of control and actually have a panic or anxiety attack so that there are advantages to using a symbolic model.

As the review of the literature showed, modelling is very effective with children. One good way of using symbolic modelling is through the design and use of appropriate cartoons and/or puppets/dolls.

(For a clinical example of modelling combined with relaxation and systematic desensitisation, see Horne D.J. de L. and H. McCormack, M. (1984) Behavioural psychotherapy for a blood and needle phobic mastectomy patient receiving adjuvant chemotherapy. Behavioural Psychotherapy, 12, 342-348).

- (d) Parent Involvement A particularly important area of preparing children for invasive procedures is the involvement of the primary care-giver (normally parents or close relatives). Care-givers need to be taught how to reinforce the coping strategies that the doctor/nurse or other health provider is using with the child. This normally requires the care-giver to actively remind the child that he/she has some power and control, and that they can cope with what is happening. This means the care-giver needs to be involved in the communication with the clinicians and child so that the care-giver's anxieties do not add to the anxiety the child may already have. An anxious and ignorant care-giver may turn a relaxed and compliant child into a panic stricken, uncooperative patient; care-givers are one form of powerful model.

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Evaluation of the clinical effectiveness of the cognitive and behavioural preparation procedures

Measurement of changes in behaviour and of cognitive functions does not have to be complex. At a very basic level all of clinician, patient and significant others (e.g. parent) can plot the frequency and duration of selected behaviours (e.g. the amount of time a person spends complaining of pain after surgery). In addition, it is very simple to provide a basic rating of the intensity of an experience (e.g. a patient can learn to monitor their own level of pain or anxiety by using a simple analogue rating scale going from zero (no pain at all) to 100 (the most unbearable pain ever). These simple measures can avoid both clinician and patient becoming involved in unhelpful ways of dealing with pain and stress. (E.g. a threshold level of pain where the patient's psychological coping strategies break down can be established, perhaps by using a rating by the patient of 70 or more. If it is known that a certain post-operative procedure is going to cause pain to go over this threshold, such as dressing a wound caused by severe burning, then the analgesic should be given before the procedure occurs and not afterwards as a response to the pain. This can prevent the patient learning to be dependent on analgesics for any discomfort or pain because the analgesic is not being used to reinforce, or reward, relief from pain but rather it is used as a prophylaxis to prevent severe pain occurring.

Just as the physician or surgeon wants to assess the effectiveness of intervention from a medical viewpoint, it is also important to assess the effectiveness of treatment from a psychological viewpoint. By using both behavioural and analogue measures during the patient's post-invasive-procedures recovery period, the chances of the patient going away with an acquired medical phobia or fear are reduced. The clinician is also able to see that the use of cognitive and behavioural strategies in preparation for invasive procedures does actually decrease the amount of suffering and the amount of resources required for looking after the patient following these invasive procedures. Also, if this kind of evaluation data is explicit it encourages the doctors, nurses and other health professionals to be aware that psychological preparation is an intrinsic and essential part of preparation for surgery and invasive procedures and that it should become part of routine procedures in patient care.

Appendix 1: Instructions on Communication Skills and Role Playing

Objectives:

- (i) To assess the patient's situation/problem and feelings;
- (ii) To help the patient trust you enough to help them;
- (iii) To develop a level of communication between you and the patient in which the patient feels like a contributing party with some control.

Basic Skills:

- active listening
- reflecting and paraphrasing
- asking questions
- information giving
- responding to process

Active listening

Patients often feel confused about what is happening to them. Their doctor or other medical personnel can help by attending to the immediate needs first so that the patient feels their situation is manageable. This reduces panic and increases confidence.

Active listening means to listen to WHAT people say and HOW they say it (the feelings behind the words; gestures) and it reflects back the feelings we notice.

To develop a trusting and caring relationship with the patient, the doctor needs to make him/her feel listened to and understood. By reflecting or feeding back to the patient what they have said and feel, you let them know they are being listened to and understood.

For e.g. "Since I broke off with Karen I've lost interest in everything".

Response: "It sounds like it's been pretty hard for you".

Try this

"I'm going to end up in a psychiatric hospital if I go on like this".

- (a) Yes, you sound pretty odd to me
- (b) You feel life is getting on top of you
- (c) There's nothing wrong with psychiatric hospitals
- (d) Don't talk like that. You'll make yourself miserable

Which response shows active listening?
What is unhelpful about the other responses?

Assess the main message of what the patient is saying by observing. The verbal (what the patient is saying) and nonverbal messages (tone of voice, speed, posture, gestures).

Reflecting and paraphrasing

Reflecting:

This technique is used to let the patient know you are listening to him or her. Reflecting does not add your own interpretations.

You can:-

Reflect the story

"So you've spent all morning waiting for your tests and now they've been postponed".

Reflect the voice tone

"I can feel the sense of frustration in your voice".

Link feelings with the story

"You feel frustrated because you're not sure what to do".

or "So this whole experience has left you frustrated and confused".

Reflect the message

"It sounds like this is one of many experiences where you feel confused in knowing what is happening to you"

Paraphrasing:

This skill is used in reflecting the message so the patient knows you have understood what is being said and felt. This shows you are empathising (feeling what it's like to be in the patients' position) with the patient.

Try this:-

Patient:

"I'm in hospital to have some tests. My G.P. suspects an ulcer; but nobody has told me exactly what kind of tests. I'm supposed to have taken some enemas and not eaten anything today. I've heard rumours of what these tests are like but, I don't really know".

Give a paraphrasing response before looking at the correct version.

Correct response:

"You feel afraid about the possibility of having an ulcer and you're confused about what is going to happen during the tests. Although people have told you some things about the tests you still feel you don't know all that you would like to know".

Asking questions

Listening responds initially to what the patient is telling you. Questions are often needed to invite them to say more. Questions might be used to:-

1. Find out facts
"Is this your first time in hospital?"

Closed questions are helpful here. These usually give us YES or NO answers so you need to follow with some open questions.

2. To invite the patient to share more

Examples include:

"What are you most upset about?"
"Can you say more about that?"
"How did you feel when you found out about your illness?"

Specific (concrete) questions can be used to help focus the upset patient who is speaking vaguely.

Eg.

"You said you don't like being in hospital. Is there something specific that you don't like?"

Giving information

In responding to a patient you need to communicate friendliness, informality and competence. Speak clearly and strongly. Let your tone be warm and friendly. Engage each patient as personally as possible. Let them know by your attending responses that you are ready to listen to them and open to whatever they have to say. You do this through both verbal and non verbal aspects of communicating.

Most of the time, patients are unable to understand and accept their situation or what is happening to them because they lack information or hold incorrect information.

It is the role of medical staff to supply the appropriate information in clear and simple language so that the patient does not feel inferior and is able to understand what is being said. This helps the patient think about their situation more broadly. Giving patients information that is easy to understand empowers them and allows them to feel responsible for their role in the situation in order to achieve a more successful recovery.

Responding to process

It is important for the practitioner to be aware of what is happening between the patient and the doctor (or medical staff) and, where necessary, to switch the focus of your responses to this process of what is happening in the situation.

For example:

- is the conversation going in circles?
- is there rapport between you and the patient?
- is the patient fulfilling your requests or are they reluctant to comply?
- are you hearing each other?

Remember

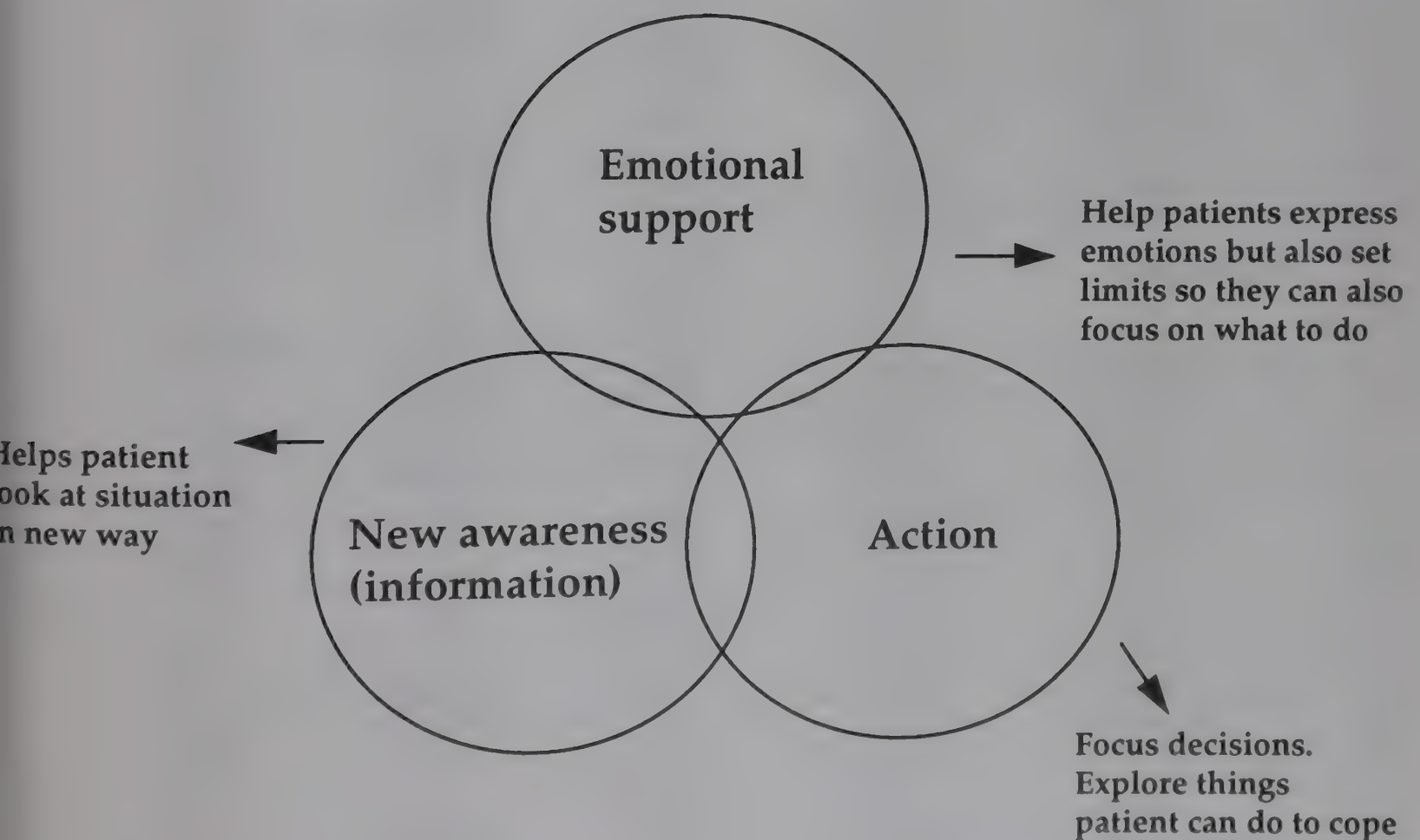
Look at your attitude. How you feel about the patient who is talking to you has a great influence upon your ability to hear what is being said. With a proper listening attitude, you will be able to show the patient that you accept them as they are, that you are not looking up or down at them, but that the patient is a person of worth in whom you are genuinely interested.

Assume nothing about the patient. Don't assume that they know anything or that they think any type of behaviour is right or wrong or that their feelings in a situation are the same as yours. This will be easier if you are really concentrating on listening and understanding. With practice you will learn to see things from the others person's position.

Be attentive. Try not to let your mind wander. It is easy to get lost in your own thoughts or reactions to what is being said.

Listening is a process of helpful communications. It is not a lecture nor is it a passive grunt. It is an active involvement between the patient and the doctor (medical staff).

Three things which help coping are:



Listening checklist

Signs of a poor listener

A poor listener

- 1.....interrupts my flow of speech or thinking
- 2.....changes the subject
- 3.....thinks of his reply while I am still speaking
- 4.....gives advice rather than sharing in a search for answers
- 5.....generalises by telling me that I am the same as everyone else
- 6.....jumps to conclusions and makes interpretations
- 7.....tries to 'fix' my problem
- 8.....moves mentally and emotionally outside my situation
- 9.....moves his hands or feet or bodily position a lot
- 10....says 'the same thing happened to me'
- 11....feels that he has to fill pauses or silences
- 12....avoids my questions

Signs of a good active listener

A good listener

- 1.....senses what I am feeling
- 2.....is patient with silences
- 3.....lets me tell my story without interrupting
- 4.....gets inside my world. walks in my shoes
- 5.....reflects my thoughts and feelings
- 6.....accepts me without judging
- 7.....helps me make my own decisions
- 8.....puts aside their own concerns and needs
- 9.....doesn't presume to have the answers
- 10....shows warmth, interest and empathy
- 11....invites me to share more.

Adapted from TELEPHONE COUNSELLING by Gordon Hambly, published by Joint Board of Christian Education, Australia. (Used with permission).

Role playing

Simple role playing techniques can easily be used to teach the communication skills just described.

The instructor can give each member of the class or group a role to play. One student could be a patient, another a relative of the patient and another a doctor or nurse, etc.

Often it is helpful to write the role down on a piece of paper and give it to the students and ask them to look at their role for a few minutes in order to get into the role, before they are asked to play it.

The students who are not role playing act as observers and record what they observed during the role play in order to provide feedback and to facilitate discussion when the role play is ended.

Each student with a role then acts out a scene which can illustrate the importance of effective communication to good diagnosis, treatment and care.

Example

One student acts as a patient with abdominal pain which will turn out to be bowel cancer but the patient is unaware of this.

Another student acts as the patient's spouse, who also does not know what is wrong.

Another student is the doctor who has carried out the examination, ordered tests and made the diagnosis. The doctor has to explain the problem, the nature of treatment, and the likely outcome.

Another student could act as a nurse who is present at the consultation.

By having a number of students carry out the role-play in front of the class it quickly becomes apparent what makes good and poor communication.

Appendix 2: Instructions for Progressive Muscle Relaxation

Progressive muscle relaxation was developed by Jacobsen (1938), and is one of the most widely used relaxation techniques. It teaches a person to alternately tense and relax different muscle groups in the body in a systematic way. Through this technique, the person becomes aware of where the tension is in the body, and how to substitute feelings of relaxation in place of feelings of tension. Following is an outline for a progressive relaxation exercise as well as word-for-word example.

Outline for progressive muscle relaxation

Basic technique:-

- A. Separately tense your individual muscle groups
- B. Hold the tension about five seconds
- C. Release the tension slowly and at the same time, silently say, 'Relax and let go'
- D. Take a deep breath
- E. As you breathe slowly out, silently say, "Relax and let go'.

Muscle groups and exercises:-

The person is lying down on a firm bed or on a mat on the floor

A. HEAD

1. Wrinkly your forehead
2. Squint your eyes tightly
3. Open your mouth wide
4. Push your tongue against the roof of your mouth
5. Clench your jaw tightly

B. NECK

1. Push your head back into the pillow
2. Bring your head forward to touch your chest
3. Roll your head to your right should
4. Roll your head to your left shoulder

C. SHOULDERS

1. Shrug your shoulders up as if to touch your ears
2. Shrug your right shoulder up as if to touch your ear

3. Shrug your left shoulder up as if to touch your ear

D. ARMS AND HANDS

1. Hold your arms out and make a fist with each hand
2. One side at a time: Push your hand sown into the surface where you are practicing
3. One side at a time: Make a fist, bend your arm at the elbow, tighten up your arm while holding the fist

E. CHEST AND LUNGS

1. Take a deep breath
2. Tighten your chest muscles

F. ARCH YOUR BACK

G. STOMACH

1. Tighten your stomach area
2. Push your stomach area out
3. Pull your stomach area in

H. HIPS, LEGS AND FEET

1. Tighten your hips
2. Push the heels of your feet into the surface where your are practicing
3. Tighten your leg muscles below the knee
4. Curl your toes under as if to touch the bottom of your feet
5. Bring your toes up as if to touch your knees

[From: Charlesworth, E.A, and Nathan, R.G. Stress Management: A Comprehensive Guide to Your Well-being 1986, pp 66-77Souvenir Press Ltd. GB.]

Word-by-word progressive relaxation:-

Preparation

Spend a little time getting as comfortable as you can. While you are finding a good position, you will also want to loosen any tight clothing. Loosen your belt or tie if they are not already loose. If your shoes feel tight, you may wish to take them off. Your legs and arms should be slightly apart.

Slowly open your mouth and move your jaw gently from side to side... Now let your mouth close, keeping your teeth slightly

apart. As you do, take a deep breath... and slowly let the air slip out.

While you tighten one part of your body, try to leave every other part limp and loose. Keep the tensed part of your body tight for a few seconds and then relax and let it go. Then take a deep breath, hold it, and as you breathe out, silently say, 'Relax and let go'. In time, this will be a technique you can use to produce rapid relaxation. Now begin your relaxation practice.

Total body tension

First, take a deep breath and tense every muscle in your body. Tense the muscles of your jaws, eyes, arms, hands, chest, back, stomach, legs, and feet. Feel the tension all over your body. Hold the tension briefly and then silently say, 'Relax and let go' as you breathe out... Let your whole body relax... Feel a wave of calm come over you as you stop tensing. Feel the relief.

Gently close your eyes and take another deep breath... study the tension as you hold your breath... Slowly breathe out and silently say, 'Relax and let go'. Feel the deepening relaxation. Allow yourself to drift more and more with this relaxation... As you continue, you will exercise different parts of your body. Become aware of your body and its tension and relaxation. This will help you to become deeply relaxed on command.

Head and face

Keeping the rest of your body relaxed, wrinkle up your forehead. Do you feel the tension? Your forehead is very tight. Briefly pause and be aware of it... Now, relax and let go. Feel the tension slipping out. Smooth out your forehead and take a deep breath. Hold it. (Briefly pause). As you breathe out, silently say, 'Relax and let go'.

Squint your eyes tightly as if you are in a dust storm. Keep the rest of your body relaxed. Briefly pause and feel the tension around your eyes... Now, relax and let go. Take a deep breath and hold it. (Briefly pause). As you breathe out say, 'Relax and let go'.

Close your mouth. Push your tongue against the roof of your mouth. Study the tension in your mouth and chin. Briefly hold the tension... Relax and let go. Take a deep breath. Hold it. (briefly pause). Now, silently say, 'Relax and let go' as you breathe out. When you breathe out, let your tongue rest comfortably in your mouth, and let your lips be slightly apart.

Keep the rest of your body relaxed, but clench your jaw tightly. Feel the tension in your jaw muscles. Briefly hold the tension.. Now relax and let go, and take a deep breath. Hold it.

(Briefly pause). Silently say, 'Relax and let go' as you breathe out.

Think about the top of your head, your forehead, eyes, jaws, and cheeks. Make sure these muscles are relaxed... have you let go of all the tension? Continue to let the tension slip away and feel the relaxation replace the tension. Feel your face becoming very smooth and soft as all the tension slips away... Your eyes are relaxed... Your tongue is relaxed. Your jaws are loose and limp... All of your neck muscles are also very, very relaxed.

All of the muscles of your face and head are relaxing more and more... Your head feels as though it could roll from side to side, and your face feels soft and smooth. Allow your face to continue becoming more and more relaxed as you now move to other areas of your body.

Shoulders

Now shrug your shoulders up and try to touch your ears with your shoulders. Feel the tension in the shoulders and neck. Hold the tension... Now, relax and let go. As you do, feel your shoulder joining the relaxed parts of your body. Take a deep breath. Hold. (Briefly pause). Silently say, 'Relax and let go' as you slowly breathe out.

Notice the difference, how the tension is giving way to relaxation. Shrug your right shoulder up and try to touch your right ear. Feel the tension in your right shoulder and along the right side of your neck. Hold the tension... Now relax and let go. Take a deep breath. Hold it. (Briefly pause). Silently say, 'Relax and let go' as you slowly breathe out.

Next, shrug your left shoulder up and try to touch your left ear. Feel the tension in your left shoulder and along the left side of your neck. Hold the tension... Now, relax and let go. Take a deep breath. Hold it. (Briefly pause). Silently say 'Relax and let go' as you slowly breathe out. Feel the relaxation seeping into the shoulders. As you continue, you will become loose, limp, and relaxed as an old rag doll.

Arms and hands

Stretch your arms out and make a fist with your hands. Feel the tension in your hands and forearms. Hold the tension... Now, relax and let go. Take a deep breath. Hold it. (Briefly pause). Silently say, 'Relax and let go' as you slowly breathe out.

Push your right hand down into the surface it is resting on. Feel the tension in your arm and shoulder. Hold the tension. Now, relax and let go. Take a deep breath. Hold it. (Briefly pause). Silently say, 'Relax and let go' as you slowly breathe out.

Next, push your left hand down into whatever it is resting on. Feel the tension in your arm and shoulder. Hold the tension... Now, relax and let go. Take a deep breath. Hold it. (Briefly pause). Silently say, 'Relax and let go' as you slowly breathe out.

Bend your arms toward your shoulders and double them up as you might to show off your muscles. Feel the tension. Hold the tension... Now, relax and let go. Take a deep breath. Hold it (Briefly pause). Silently say, 'Relax and let go' as you slowly breathe out.

Chest and lungs

Move on to the relaxation of your chest. Begin by taking a deep breath that totally fills your lungs. As you hold your breath notice the tension. Be aware of the tension around your ribs... Silently say, "Relax and let go" as you slowly breathe out. Feel the deepening relaxation as you continue breathing easily, freely, and gently. (Briefly pause).

Take in another deep breath. Hold it and again feel the contrast between tension and relaxation. As you do, tighten your chest muscles. Hold the tension... Silently say, 'Relax and let go' as you slowly breathe out. Feel the relief as you breathe out and continue to breathe gently, naturally, and rhythmically. Breathe as smoothly as you can. You will become more and more relaxed with every breath.

Back

Keeping your face, neck, arms, and chest as relaxed as possible, arch your back up (or forward if you are sitting). Arch it as if you had a pillow under the middle and low part of your back. Briefly hold that position... Now, relax and let go. Take a deep breath. Hold it. (Briefly pause). Silently say, 'Relax and let go' as you breathe out. Let that relaxation spread deep into your shoulders and down into your back muscles.

Feel the slow relaxation developing and spreading all over. Feel it going deeper and deeper. Allow your entire body to relax. Face and head relaxed... Neck relaxed... Shoulders relaxed... Arms relaxed... Chest relaxed... Back relaxed... All these areas are relaxing more and more, becoming more deeply relaxed than you thought possible.

Stomach

Now begin the relaxation of the stomach area. Tighten up this area. Briefly hold the tension... Relax and let go. Feel the relaxation pour into your stomach area. All the tension is being replaced with relaxation, and you feel the general

well-being that comes with relaxation. Take a deep breath. Hold it. (Briefly pause). Silently say, 'Relax and let go' as you slowly breathe out.

Now experience a different type of tension in the stomach area. Push your stomach out as far as you can. Briefly hold the tension... Now, relax and let go. Take a deep breath. Hold it (Briefly pause). Silently say, 'Relax and let go' as you slowly breathe out.

Now, pull your stomach in. Try to pull your stomach and touch your backbone. Hold it... Now, relax and let go. Take a deep breath. Hold it (Briefly pause). Silently say, Relax and let go' as you breathe out...

You are becoming more and more relaxed. Each time you breathe out, feel the gently relaxation in your lungs and your body. AS you continue to do these exercise, your chest and stomach area will relax more and more. Check the muscles of your face, neck, shoulders, arms, chest, and stomach. Make sure they are still relaxed. If they are not, then tense and release them again. Whatever part is still less than fully relaxed is starting to relax more and more. Soon you will be able to tell when you have tension in any part of your body. You will learn that you can always relax and let go of the tension you may find in any part of your body.

Hips, leg and feet

Now, begin the relaxation of your hips and legs. Tighten your hips and legs by pressing down the heels of your feet onto the surface they are resting on. Tighten these muscles. Keep the rest of your body as relaxed as you are and press your heels down... Now, hold the tension... Relax and let go. Feel your legs float up. Take a deep breath. Hold it. (Briefly pause). Silently say, 'Relax and let go' as you breathe out. Feel the relaxation pouring in. Notice the difference between tension and relaxation. Let the relaxation become deeper and deeper. Enjoy the relaxation.

Next, tighten your lower leg muscles. Feel the tension. Briefly hold the tension... Now, relax and let go. Take a deep breath. Hold it. (Briefly pause). Silently say, 'Relax and let go' as you breathe out.

Now, curl your toes downward. Curl them down and try to touch the bottom of your feet with your toes. Tighten them and feel the tension... Relax and let go. Wiggle your toes gently as you let go of the tension. Let the tension be replaced with relaxation. Take a deep breath. Hold it. (Briefly pause). Silently say, 'Relax and let go' as you slowly breathe out.

Now, bend your toes back the other way. Bend your toes right up toward your knees. Feel the tension. Try to touch your knees with your toes. Feel the tension. Hold the tension.

Relax and let go. Feel all the tension slip right out. Take a deep breath. Hold it. (Briefly pause). Silently say, 'Relax and let go' as you slowly breathe out. Feel the tension leaving your body and the relaxation seeping in.

Body review

You have progressed through all the major muscles of your body. Now, let them become more and more relaxed. Continue to feel yourself becoming more and more relaxed each time you breathe out. Each time you breathe out, think about a muscle and silently say, 'Relax and let go'... Face relax... Shoulders relax... Arms relax... Hands relax... Chest relax... Back relax... Stomach relax... Hips relax... Legs relax... Feet relax... Your whole body is becoming more and more relaxed with each breath.

Spend a few more minutes relaxing, if you would like. If, during your day, you find yourself getting upset about something, remember the relaxation you have just experienced. Before you get upset, take a deep breath, hold it and as you breathe out, silently say, 'Relax and let go'. With practice, you will be able to use this technique to relax whenever you begin to feel the stress of every day living or at any other time you want.

[From: Charlesworth, E.A, and Nathan, R.G. Stress Management: A Comprehensive Guide to Your Well-being 1986, pp 66-77 Souvenir Press Ltd. GB.]

Appendix 3: Cognitive Rehearsal

In many ways it is useful to look at this as an internal kind of modelling. The aim is to help the patient realistically think about a prospective threatening situation, to experience their feelings about it, and to plan what means they will use to cope. Once this has been achieved, the patient practices by going through their imaginary rehearsal a number of times before actually having to face up to the real threat or uncomfortable experience; e.g. an injection, a bronchoscopy, an operation, etc.

This cognitive rehearsal can use both self-talk and imagery.

The patient is encouraged to develop their own self-coping statements while imagining themselves in the unpleasant scene. Example: A person having a dental filling who is fearful about it, perhaps, in part, because of previous insensitive treatment, could go through the following preparation.

Provision of information:

- (i) The need for the filling (operation, etc.) is clearly explained.
- (ii) The procedures to be performed are clearly explained. To find out if the patient has understood the information their understanding needs to be checked.

Ask: "Are you clear about what I have explained? If you have any worries or questions please tell me what they are so that I can answer your questions as clearly as possible".

- (iii) The sensations that are likely to occur are explained, perhaps using a "model" to talk about their experience having the same operation.

Relaxation instruction

Teach the patient to relax. With practice this may take as short as 15 minutes. Standardised instructions can be used on an audiotape (See Appendix 2, Instructions for Progressive Muscle Relaxation).

Imagery and coping

Ask the patient to visualise or imagine themselves going through with the aversive procedure whilst practising self-relaxation, and simultaneously telling themselves that they know what is going on and what to expect and that they can cope.

Example: "I know the injection/filling etc. will hurt but I know the pain will not last long and that it will not feel so bad if I practice my relaxation and controlled breathing. If I let my muscles remain relaxed the pain will feel less intense. I know I can cope. I have mentally been practising coping with this and now here is my chance to use my new skills".

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